Section 5
Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, 2002

TABLES

FIGURES

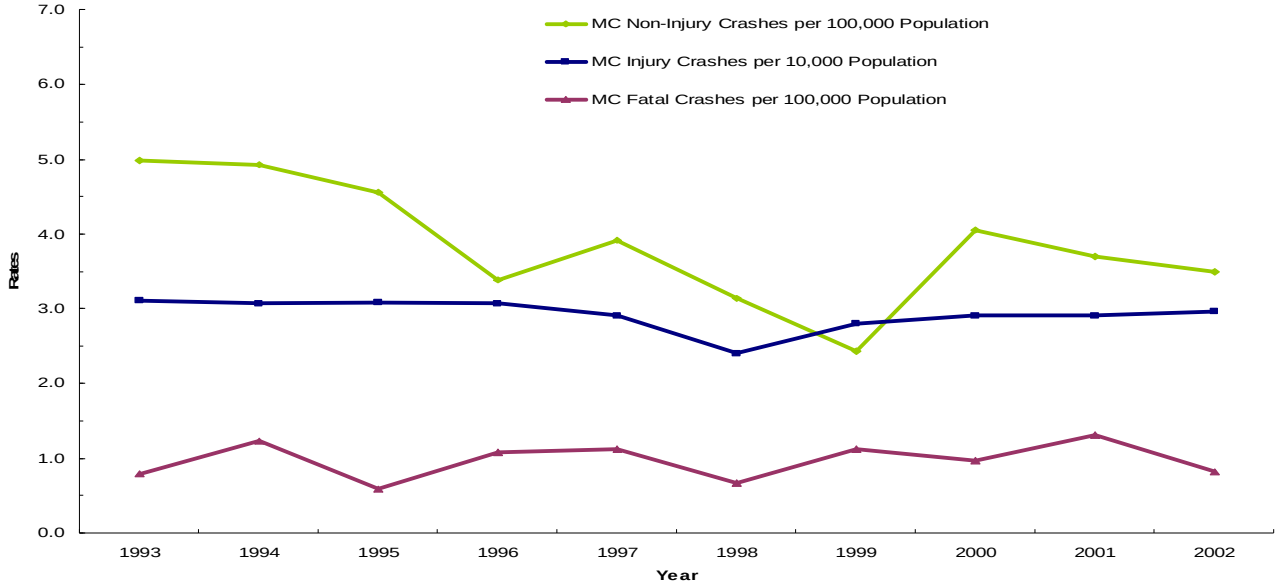
Motorcycle Crashes 1993 - 2002

Table 5.01 and Figure 5.01 show the trends in motorcycle crashes from 1993 to 2002. Total motorcycle crashes, and motorcycle injury crashes declined from 1993 to 1998, with the lowest number of crashes occurring in 1998. In 2002, there was a 4.0% increase in total motorcycle crashes and a 6.0% increase in motorcycle injury crashes from 2001. While, fatal motorcycle crashes vary from year to year, the small number of fatal motorcycle crashes makes it difficult to compare increases and decreases from year to year.

Table 5.01 Motorcycle Crashes (MC), Utah 1993-2002

	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
Year	Number	Rate per 100,000 Population	Number	Rate per 10,000 Population	Number	Rate per 100,000 Population	Number	Rate per 10,000 Population
1993	94	5.0	589	3.1	15	0.8	698	3.7
1994	96	4.9	597	3.1	24	1.2	717	3.7
1995	86	4.6	614	3.1	11	0.6	711	3.6
1996	66	3.4	626	3.1	21	1.1	713	3.5
1997	80	3.9	594	2.9	23	1.1	697	3.4
1998	66	3.1	509	2.4	14	0.7	589	2.8
1999	52	2.4	602	2.8	24	1.1	678	3.2
2000	88	4.1	624	2.9	21	1.0	733	3.4
2001	82	3.7	648	2.9	29	1.3	759	3.4
2002	81	3.5	689	3.0	19	0.8	789	3.4

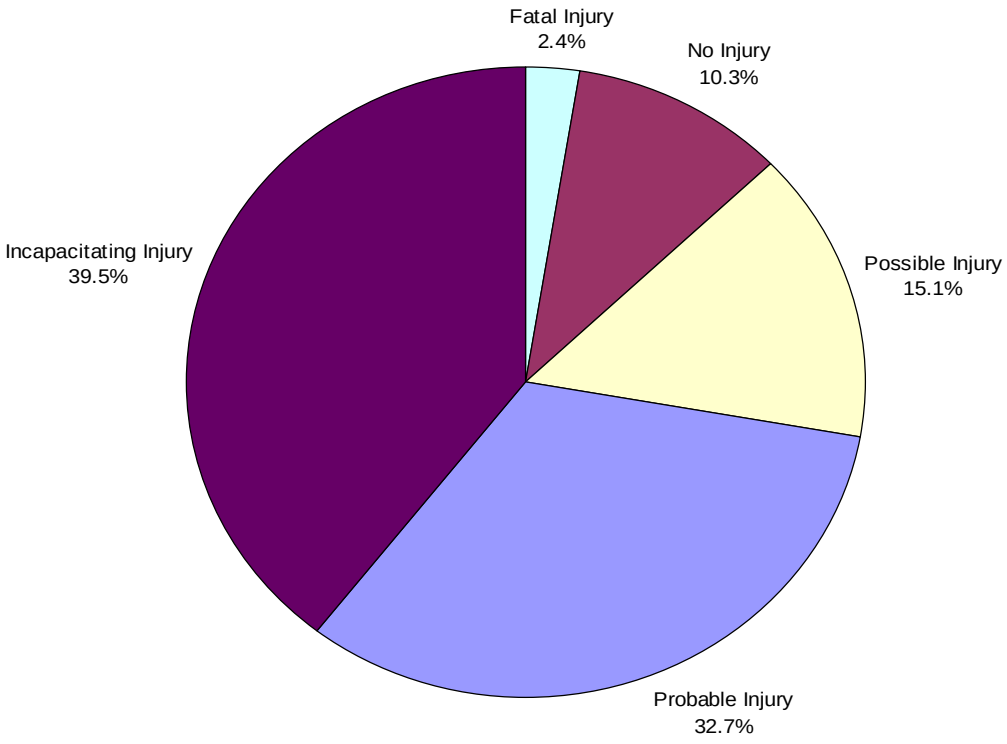
Figure 5.01 Motorcycle Crashes, Utah 1993-2002



Motorcycle Crash Severity

Figure 5.02 shows the breakdown of motorcycle crash severity. Most of the motorcycle crashes resulted in an injury (89.7%) compared to 37.2% of all motor vehicle crashes (see Figure 1.03). The percentage of motorcycle crashes that resulted in a fatality was 2.4%; this is nearly five times the percentage for all motor vehicle crashes (0.5%).

Figure 5.02 Severity of Motorcycle Crashes as Reported by Police, Utah 2002 (n=789)



Motorcycle Crashes by County

The rates of total motorcycle crashes, motorcycle injury crashes and motorcycle fatal crashes for each county are shown in Table 5.02. Based on 10,000 population, the top three counties for total motorcycle crashes were Rich, Garfield, and Kane. The top three counties for motorcycle injury crashes were Kane, Daggett, and Rich. The top three counties for fatal motorcycle crashes were Rich, Garfield, and Millard**.**

Table 5.02 Motorcycle (MC) Crashes by County, Utah 2002

	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
County	Number	Rate per 100,000 Population	Number	Rate per 100,000 Population	Number	Rate per 100,000 Population	Number	Rate per 100,000 Population
Beaver	1	16.0	10	160.4	0	0.0	11	176.5
Box Elder	0	0.0	8	18.3	0	0.0	8	18.3
Cache	3	3.1	29	30.4	0	0.0	32	33.5
Carbon	0	0.0	14	69.7	1	5.0	15	74.7
Daggett	0	0.0	2	210.1	0	0.0	2	210.1
Davis	10	4.0	55	22.0	1	0.4	66	26.4
Duchesne	0	0.0	5	33.8	1	6.8	6	40.6
Emery	0	0.0	3	28.4	0	0.0	3	28.4
Garfield	4	85.6	9	192.6	1	21.4	14	299.7
Grand	1	11.8	9	106.0	0	0.0	10	117.8
Iron	0	0.0	16	46.3	0	0.0	16	46.3
Juab	1	11.3	7	79.3	0	0.0	8	90.7
Kane	0	0.0	16	256.8	0	0.0	16	256.8
Millard	0	0.0	10	78.3	1	7.8	11	86.2
Morgan	2	27.8	13	180.4	0	0.0	15	208.2
Piute	0	0.0	2	142.2	0	0.0	2	142.2
Rich	1	50.5	4	202.1	1	50.5	6	303.2
Salt Lake	66	7.1	267	28.9	4	0.4	337	36.5
San Juan	0	0.0	7	49.1	0	0.0	7	49.1
Sanpete	2	8.5	0	0.0	1	4.2	3	12.7
Sevier	0	0.0	9	47.0	0	0.0	9	47.0
Summit	2	6.3	24	75.0	0	0.0	26	81.3
Tooele	2	4.4	8	17.5	2	4.4	12	26.3
Uintah	1	3.8	11	41.7	0	0.0	12	45.5
Utah	11	2.8	122	31.2	3	0.8	136	34.8
Wasatch	2	12.0	10	60.2	1	6.0	13	78.3
Washington	7	7.1	25	25.3	0	0.0	32	32.4
Wayne	0	0.0	2	77.4	0	0.0	2	77.4
Weber	14	7.0	57	28.5	2	1.0	73	36.5
Statewide	130	5.6	755	32.5	19	0.8	904	38.9

Motorcycle Crash Times

Total motorcycle crashes, and motorcycle injury crashes followed the same time pattern, peaking between 1 p.m. and 6 p.m. The highest proportion of fatal motorcycle crashes occurred during the 4 p.m. hour (Table 5.03 and Figure 5.03). Only one out of ten motorcycle crashes resulted in no injury.

Table 5.03 Hour of Motorcycle Crashes, Utah 2002

Hour	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Midnight	2	2.5%	10	1.5%	2	10.5%	14	1.8%
1 a.m.	1	1.2%	13	1.9%	2	10.5%	16	2.0%
2 a.m.	1	1.2%	4	0.6%	0	0.0%	5	0.6%
3 a.m.	0	0.0%	8	1.2%	0	0.0%	8	1.0%
4 a.m.	1	1.2%	3	0.4%	0	0.0%	4	0.5%
5 a.m.	0	0.0%	5	0.7%	0	0.0%	5	0.6%
6 a.m.	2	2.5%	10	1.5%	0	0.0%	12	1.5%
7 a.m.	7	8.6%	13	1.9%	0	0.0%	20	2.5%
8 a.m.	2	2.5%	10	1.5%	0	0.0%	12	1.5%
9 a.m.	3	3.7%	13	1.9%	0	0.0%	16	2.0%
10 a.m.	3	3.7%	37	5.4%	0	0.0%	40	5.1%
11 a.m.	2	2.5%	19	2.8%	2	10.5%	23	2.9%
Noon	4	4.9%	40	5.8%	2	10.5%	46	5.8%
1 p.m.	6	7.4%	54	7.8%	2	10.5%	62	7.9%
2 p.m.	8	9.9%	54	7.8%	2	10.5%	64	8.1%
3 p.m.	7	8.6%	55	8.0%	1	5.3%	63	8.0%
4 p.m.	4	4.9%	57	8.3%	3	15.8%	64	8.1%
5 p.m.	10	12.3%	69	10.0%	0	0.0%	79	10.0%
6 p.m.	7	8.6%	50	7.3%	0	0.0%	57	7.2%
7 p.m.	5	6.2%	45	6.5%	0	0.0%	50	6.3%
8 p.m.	3	3.7%	33	4.8%	0	0.0%	36	4.6%
9 p.m.	2	2.5%	35	5.1%	1	5.3%	38	4.8%
10 p.m.	1	1.2%	29	4.2%	0	0.0%	30	3.8%
11 p.m.	0	0.0%	23	3.3%	2	10.5%	25	3.2%
Grand Total	81	100.0%	689	100.0%	19	100.0%	789	100.0%

Figure 5.03 Hour of Motorcycle Crashes, Utah 2002 (See Table 5.03 for values)

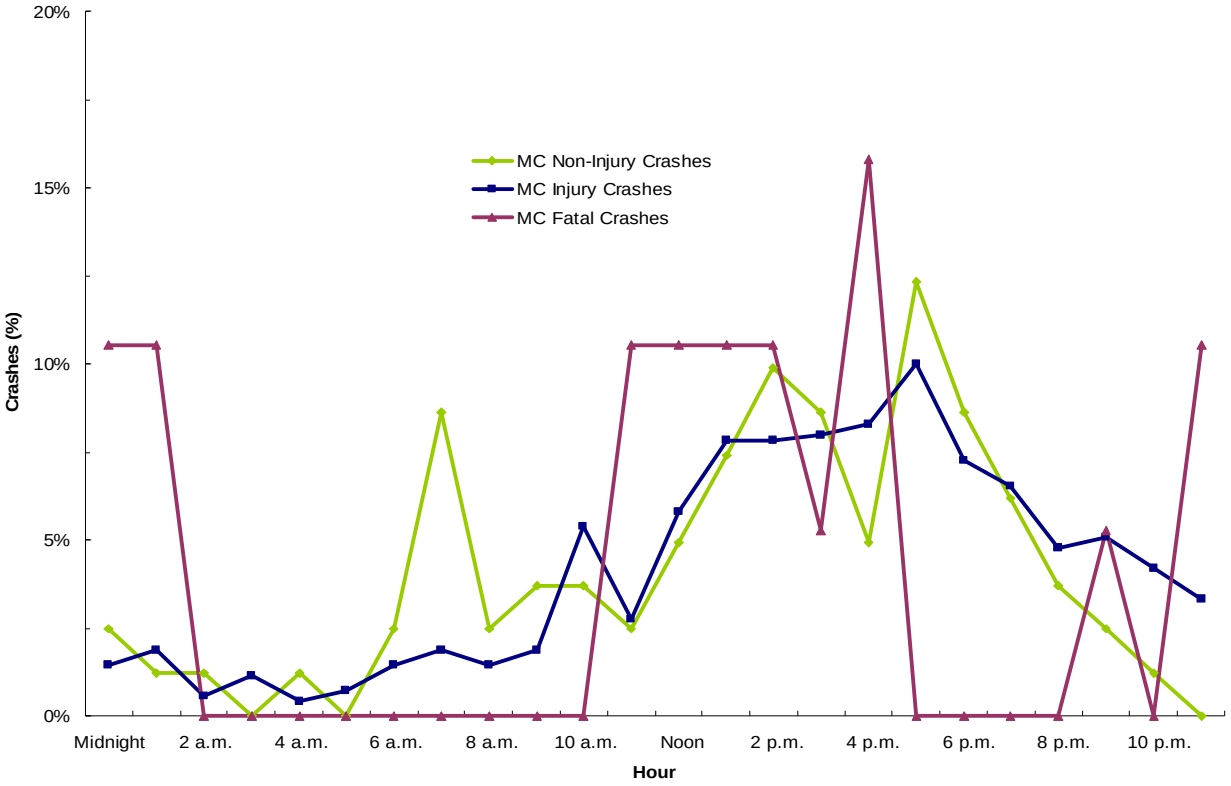


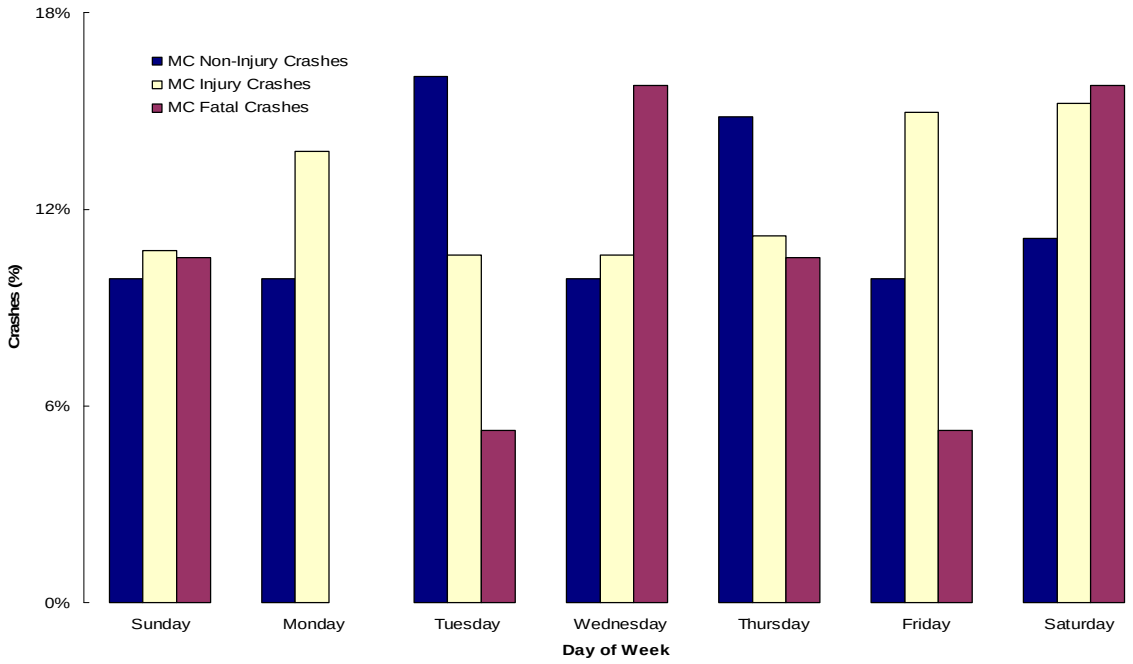
Table 5.04 shows the number of total motorcycle crashes and the rate of total motorcycle crashes per day for each month. May through September had the highest rate of total motorcycle crashes, injury crashes, and fatal crashes per day. Very few motorcycle crashes occurred in the winter months, which may be due to the decrease of individuals riding motorcycles in the winter.

Table 5.04 Month of Motorcycle Crashes, Utah 2002

	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
Crash Month	Number	Rate per day	Number	Rate per day	Number	Rate per day	Number	Rate per day
January	2	0.1	7	0.2	0	0.0	9	0.3
February	1	0.0	12	0.4	1	0.0	14	0.5
March	7	0.2	18	0.6	0	0.0	25	0.8
April	4	0.1	55	1.8	0	0.0	59	2.0
May	6	0.2	90	2.9	2	0.1	98	3.2
June	12	0.4	94	3.1	3	0.1	109	3.6
July	17	0.5	115	3.7	4	0.1	136	4.4
August	11	0.4	130	4.2	2	0.1	143	4.6
September	11	0.4	84	2.8	5	0.2	100	3.3
October	7	0.2	53	1.7	1	0.0	61	2.0
November	2	0.1	13	0.4	1	0.0	16	0.5
December	1	0.0	18	0.6	0	0.0	19	0.6
Total	81	0.2	689	1.9	19	0.1	789	2.2

The largest number of total motorcycle crashes and motorcycle injury crashes occurred on Friday, Saturday, and Monday (Figure 5.04 and Table 5.05). Fatal motorcycle crashes most frequently occurred on Wednesday and Saturday, accounting for 31.6% of all fatal motorcycle crashes. Tuesdays had the highest percentage of non-injury crashes..

Figure 5.04 Day of Week for Motorcycle Crashes, Utah 2002



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. motorcycle injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 5.05 Day of Week for Motorcycle Crashes, Utah 2002

	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
Day of Week	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Sunday	8	9.9%	74	10.7%	2	10.5%	84	10.6%
Monday	8	9.9%	95	13.8%	0	0.0%	103	13.1%
Tuesday	13	16.0%	73	10.6%	1	5.3%	87	11.0%
Wednesday	8	9.9%	73	10.6%	3	15.8%	84	10.6%
Thursday	12	14.8%	77	11.2%	2	10.5%	91	11.5%
Friday	8	9.9%	103	14.9%	1	5.3%	112	14.2%
Saturday	9	11.1%	105	15.2%	3	15.8%	117	14.8%
Missing	15	18.5%	89	12.9%	7	36.8%	111	14.1%
Total	81	100.0%	689	100.0%	19	100.0%	789	100.0%

Motorcycle Crash Characteristics

Table 5.06 shows that crashes involving another motor vehicle represented most of the total motorcycle crashes (47.8%). "Ran off the roadway " (to the right, to the left, or through the median), accounted for 26.3% of the fatal motorcycle crashes.

Table 5.06 Types of Crashes Involving Motorcycles (MC), Utah 2002

	Non-Injury Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
Crash Type	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Two Motor Vehicles	59	72.8%	309	44.8%	9	47.4%	377	47.8%
Overturned in Roadway	8	9.9%	120	17.4%	0	0.0%	128	16.2%
Ran Off Roadway - To the Right	2	2.5%	92	13.4%	2	10.5%	96	12.2%
Ran Off Roadway - To the Left	2	2.5%	44	6.4%	2	10.5%	48	6.1%
Motor Vehicle and Fixed Object	4	4.9%	30	4.4%	3	15.8%	37	4.7%
Other Non-Collision	2	2.5%	35	5.1%	0	0.0%	37	4.7%
Motor Vehicle and Wild Animal	2	2.5%	22	3.2%	0	0.0%	24	3.0%
Motor Vehicle and Other Object	0	0.0%	11	1.6%	1	5.3%	12	1.5%
Motor Vehicle and Domestic Animal	1	1.2%	10	1.5%	1	5.3%	12	1.5%
Ran Off Roadway Through Median	1	1.2%	7	1.0%	1	5.3%	9	1.1%
Motor Vehicle and Bicycle	0	0.0%	5	0.7%	0	0.0%	5	0.6%
Motor Vehicle and Pedestrian	0	0.0%	3	0.4%	0	0.0%	3	0.4%
Motor Vehicle and Skates, Scooters, and Skateboards	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Motor Vehicle and Train	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	81	100.0%	689	100.0%	19	100.0%	789	100.0%

Table 5.07 shows that the majority of total motorcycle crashes (58.5%) occurred in large urban areas. However, the fatal motorcycle crashes (47.4%) occurred in both rural and urban (200,000 people or more) areas. Motorcycle crashes were almost 6 times more likely to result in a fatality compared to other crashes.

Table 5.07 Urban / Rural Location of Motorcycle (MC) Crashes, Utah 2002

	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
Urban / Rural Location	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Rural Area - Up to 5,000	26	32.1%	245	35.6%	9	47.4%	280	35.5%
Small Urban 5,000-49,999	4	4.9%	30	4.4%	1	5.3%	35	4.4%
Urban 50,000-199,999	1	1.2%	15	2.2%	0	0.0%	16	2.0%
Urban 200,000 or More	46	56.8%	391	56.7%	9	47.4%	446	56.5%
Missing	4	4.9%	8	1.2%	0	0.0%	12	1.5%
Total	81	100.0%	689	100.0%	19	100.0%	789	100.0%

Table 5.08 shows that the leading collision types for total motorcycle crashes were two motor vehicles (47.8%) and overtuned in a roadway (16.2%). These were also the leading collision types for injury motorcycle crashes at 44.8% and 17.4%, respectively. Two motor vehicles accounted for almost one-half (47.4%) of fatal motorcycle crashes.

Table 5.08 Collision Description of Motorcycle Crashes, Utah 2002

	Non-Injury Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
Crash Type	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Two Motor Vehicles	59	72.8%	309	44.8%	9	47.4%	377	47.8%
Overturned in Roadway	8	9.9%	120	17.4%	0	0.0%	128	16.2%
Ran Off Roadway - To the Right	2	2.5%	92	13.4%	2	10.5%	96	12.2%
Ran Off Roadway - To the Left	2	2.5%	44	6.4%	2	10.5%	48	6.1%
Motor Vehicle and Fixed Object	4	4.9%	30	4.4%	3	15.8%	37	4.7%
Other Non-Collision	2	2.5%	35	5.1%	0	0.0%	37	4.7%
Motor Vehicle and Wild Animal	2	2.5%	22	3.2%	0	0.0%	24	3.0%
Motor Vehicle and Other Object	0	0.0%	11	1.6%	1	5.3%	12	1.5%
Motor Vehicle and Domestic Animal	1	1.2%	10	1.5%	1	5.3%	12	1.5%
Ran Off Roadway Through Median	1	1.2%	7	1.0%	1	5.3%	9	1.1%
Motor Vehicle and Bicycle	0	0.0%	5	0.7%	0	0.0%	5	0.6%
Motor Vehicle and Pedestrian	0	0.0%	3	0.4%	0	0.0%	3	0.4%
Motor Vehicle and Skates, Scooters, and Skateboards	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Motor Vehicle and Train	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	81	100.0%	689	100.0%	19	100.0%	789	100.0%

Motorcycle Crash Violations and Contributing Factors

Over one half (57.1%) of motorcycle drivers involved in crashes received a citation The leading violations cited were “failure to yield the right of way,” “other non-moving violations,” and “improper lookout.”

Table 5.09 Violations for Motorcycle Crashes , Utah 2002

Violations	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Failure to Yield Right of Way	5	11.9%	86	24.1%	0	0.0%	91	22.6%
Other Non-Moving Violations	6	14.3%	59	16.5%	0	0.0%	65	16.2%
Improper Lookout	9	21.4%	43	12.0%	0	0.0%	52	12.9%
All Other Moving Violations	2	4.8%	43	12.0%	0	0.0%	45	11.2%
Driving Under the Influence	1	2.4%	28	7.8%	0	0.0%	29	7.2%
Following Too Close	8	19.0%	18	5.0%	0	0.0%	26	6.5%
Improper Turn	1	2.4%	22	6.2%	1	33.3%	24	6.0%
Speeding	2	4.8%	19	5.3%	0	0.0%	21	5.2%
Red Light	2	4.8%	7	2.0%	0	0.0%	9	2.2%
Improper Lane Change	1	2.4%	7	2.0%	0	0.0%	8	2.0%
Reckless Driving	1	2.4%	7	2.0%	0	0.0%	8	2.0%
Negligent Collision	2	4.8%	5	1.4%	1	33.3%	8	2.0%
Hit and Run	0	0.0%	5	1.4%	0	0.0%	5	1.2%
Stop Sign	1	2.4%	3	0.8%	0	0.0%	4	1.0%
Improper Start and Stop	0	0.0%	2	0.6%	0	0.0%	2	0.5%
Improper Passing	0	0.0%	2	0.6%	0	0.0%	2	0.5%
Wrong Side of Road	1	2.4%	1	0.3%	0	0.0%	2	0.5%
Vehicle Homicide	0	0.0%	0	0.0%	1	33.3%	1	0.2%
Grand Total	42	100.0%	357	100.0%	3	100.0%	402	100.0%

Table 5.10 shows that the leading contributing factor for most motorcycle crashes was "improper lookout" which accounted for about 25% of contributing factors. "Following too closely" was the top contributor, 23.5%, in fatal motorcycle crashes. The combined contributing factors "driving under the influence", "had been drinking", and "under the influence of drugs" accounted for 3.7% of total motorcycle crashes and 0% of the motorcycle fatal crashes.

Table 5.10 Contributing Factors of Motorcycle Crashes, Utah 2002

	MC Non-Injury Crashes		MC Injury Crashes		MC Fatal Crashes		MC Total Crashes	
Contributing Factors	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Improper Lookout	21	25.6%	177	25.1%	2	11.8%	200	24.9%
Failed to Yield the Right of Way	8	9.8%	104	14.8%	2	11.8%	114	14.2%
Following Too Closely	9	11.0%	88	12.5%	4	23.5%	101	12.6%
Speed Too Fast	6	7.3%	65	9.2%	2	11.8%	73	9.1%
Other Improper Driving	11	13.4%	51	7.2%	3	17.6%	65	8.1%
Hit and Run	3	3.7%	31	4.4%	0	0.0%	34	4.2%
Improper Turn	5	6.1%	24	3.4%	0	0.0%	29	3.6%
Disregarded Traffic Signal	6	7.3%	19	2.7%	0	0.0%	25	3.1%
Driving Under the Influence	1	1.2%	19	2.7%	0	0.0%	20	2.5%
Improper Overtaking	2	2.4%	14	2.0%	0	0.0%	16	2.0%
Drove Left of Center	2	2.4%	12	1.7%	0	0.0%	14	1.7%
Improper Backing	0	0.0%	13	1.8%	0	0.0%	13	1.6%
Asleep	0	0.0%	11	1.6%	1	5.9%	12	1.5%
Non-Contact Vehicle Involved	0	0.0%	9	1.3%	2	11.8%	11	1.4%
Had Been Drinking	1	1.2%	9	1.3%	0	0.0%	10	1.2%
Passed Stop Sign	0	0.0%	10	1.4%	0	0.0%	10	1.2%
Tires Defective	0	0.0%	6	0.9%	0	0.0%	6	0.7%
Other Defective Condition	1	1.2%	5	0.7%	0	0.0%	6	0.7%
Fatigued	0	0.0%	4	0.6%	1	5.9%	5	0.6%
Sick or ill	1	1.2%	3	0.4%	0	0.0%	4	0.5%
Jackknife	1	1.2%	3	0.4%	0	0.0%	4	0.5%
Cargo Loss or Shift	0	0.0%	4	0.6%	0	0.0%	4	0.5%
Non-collision Fire	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Tires Defective	0	0.0%	6	0.9%	0	0.0%	6	0.7%
Improper Parking	0	0.0%	3	0.4%	0	0.0%	3	0.4%
Improper Backing	0	0.0%	13	1.8%	0	0.0%	13	1.6%
Vehicle Rolling in Traffic Lane	0	0.0%	3	0.4%	0	0.0%	3	0.4%
Asleep	0	0.0%	11	1.6%	1	5.9%	12	1.5%
Down Hill Runaway	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Cargo Loss or Shift	0	0.0%	4	0.6%	0	0.0%	4	0.5%
Steering Mechanism Defective	1	1.2%	1	0.1%	0	0.0%	2	0.2%
Eyesight Defective Uncorrected	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Fatigued	0	0.0%	4	0.6%	1	5.9%	5	0.6%
Stolen	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Jackknife	1	1.2%	3	0.4%	0	0.0%	4	0.5%
Sick or ill	1	1.2%	3	0.4%	0	0.0%	4	0.5%
Explosion or Fire	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Seperation of Units	1	1.2%	0	0.0%	0	0.0%	1	0.1%
Total	82	100.0%	704	100.0%	17	100.0%	803	100.0%

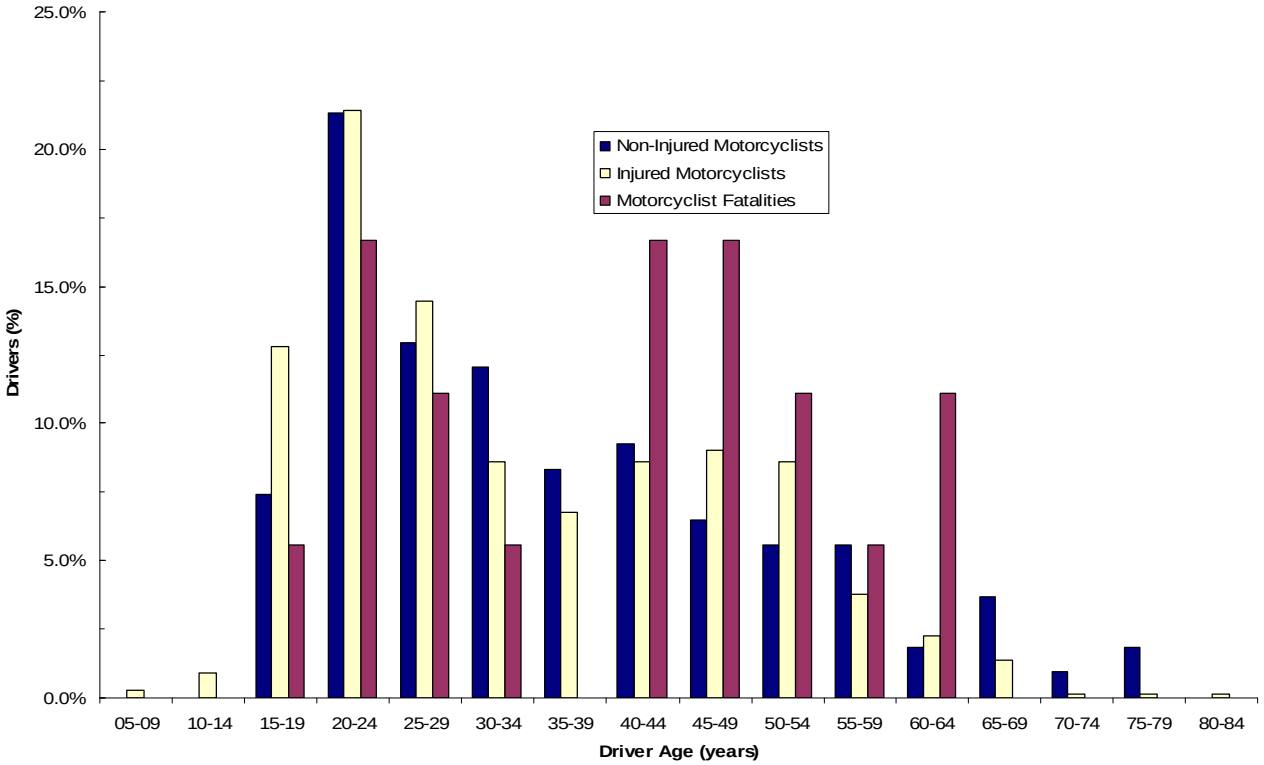
Motorcycle Drivers Involved in Crashes

Table 5.11 and Figure 5.05 show that almost half (48.5%) of the motorcycle drivers involved in total crashes were under the age of 30 years. The number of motorcycle drivers involved in total crashes and injury crashes was highest for younger drivers (20-24 years) and decreased with increasing age. Almost half of the motorcycle drivers (44.5%) involved in fatal crashes were between the ages of 40 and 54 years.

Table 5.11 Age of Motorcycle (MC) Drivers Involved in Crashes, Utah 2002

	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
Driver's Age	Number	Percent	Number	Percent	Number	Percent	Number	Percent
05-09	0	0.0%	2	0.3%	0	0.0%	2	0.3%
10-14	0	0.0%	6	0.9%	0	0.0%	6	0.8%
15-19	8	7.4%	85	12.8%	1	5.6%	94	11.9%
20-24	23	21.3%	142	21.4%	3	16.7%	168	21.3%
25-29	14	13.0%	96	14.5%	2	11.1%	112	14.2%
30-34	13	12.0%	57	8.6%	1	5.6%	71	9.0%
35-39	9	8.3%	45	6.8%	0	0.0%	54	6.8%
40-44	10	9.3%	57	8.6%	3	16.7%	70	8.9%
45-49	7	6.5%	60	9.0%	3	16.7%	70	8.9%
50-54	6	5.6%	57	8.6%	2	11.1%	65	8.2%
55-59	6	5.6%	25	3.8%	1	5.6%	32	4.1%
60-64	2	1.9%	15	2.3%	2	11.1%	19	2.4%
65-69	4	3.7%	9	1.4%	0	0.0%	13	1.6%
70-74	1	0.9%	1	0.2%	0	0.0%	2	0.3%
75-79	2	1.9%	1	0.2%	0	0.0%	3	0.4%
80-84	0	0.0%	1	0.2%	0	0.0%	1	0.1%
Unknown	3	2.8%	5	0.8%	0	0.0%	8	1.0%
Total	108	100.0%	664	100.0%	18	100.0%	790	100.0%

Figure 5.05 Age of Motorcycle Drivers Involved in Crashes, Utah 2002
(See Table 5.11 for values)



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in motorcycle injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Most motorcycle drivers involved in crashes were male (90.1%). This does not necessarily indicate that male motorcycle drivers are at greater risk for a crash, but may reflect the higher proportion of male motorcycle drivers in Utah (Table 5.12).

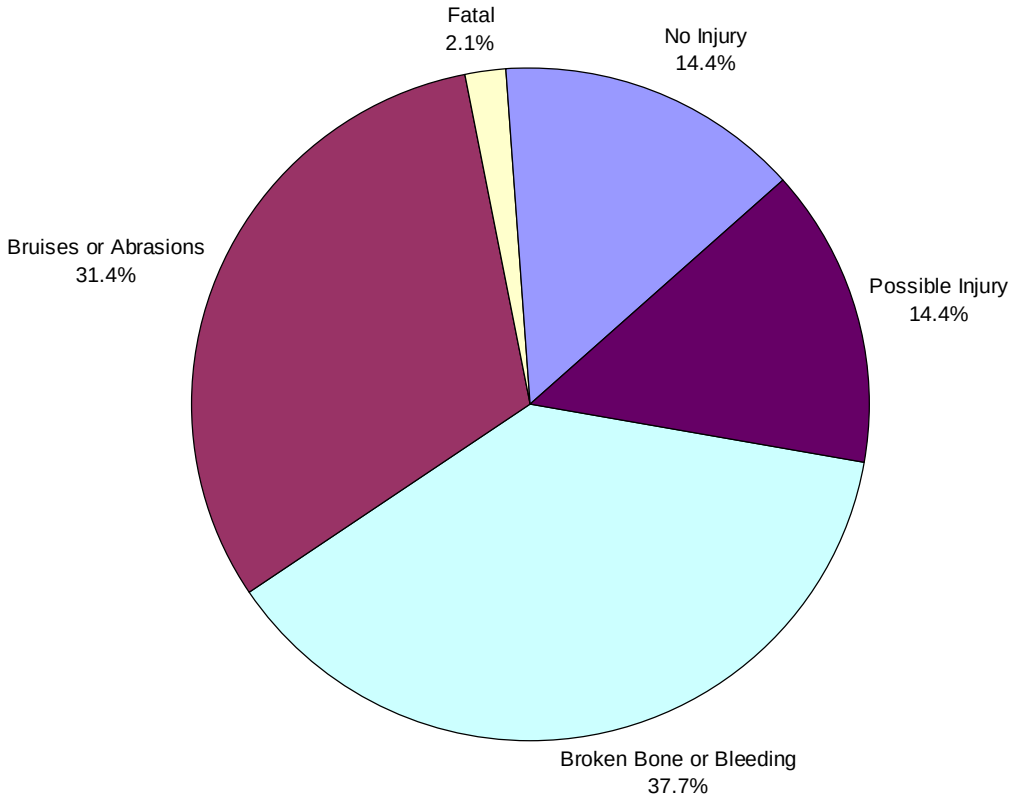
Table 5.12 Gender of Motorcycle (MC) Drivers Involved in Crashes, Utah 2002

	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
Driver's Gender	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Female	15	13.9%	57	8.6%	1	5.6%	73	9.2%
Male	91	84.3%	604	91.0%	17	94.4%	712	90.1%
Unknown	2	1.9%	3	0.5%	0	0.0%	5	0.6%
Total	108	100.0%	664	100.0%	18	100.0%	790	100.0%

Motorcyclist Injury Severity

Figure 5.06 shows that motorcyclists involved in a crash were injured at a much higher percentage (85.6%) compared to all other motor vehicle crash participants (21.9%) (see Figure 2.03). A fatal injury was sustained by 2.1% of motorcyclist compared to 0.2% of all motor vehicle crash participants. Fatalities were nearly 11 times higher for motorcyclists than for other motor vehicle crash participants.

Figure 5.06 Motorcyclist Injury Severity as Reported by Police, Utah 2002 (n=789)



Motorcyclists by County

Table 5.13 shows that while Salt Lake County has the largest number of total motorcyclists, injured motorcyclists and motorcyclists killed in crashes, the county did not have the highest rates per population. Rich County had the highest rate per population of total and injured motorcyclists and the highest rate of fatalities.

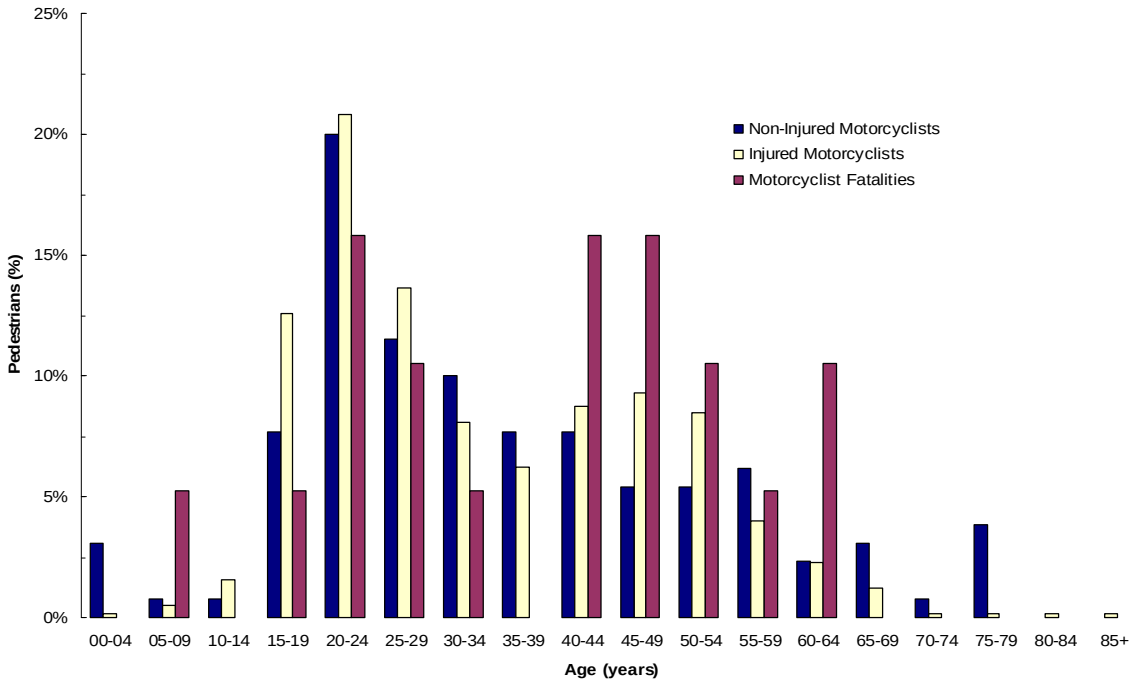
Table 5.13 Motorcyclists by County, Utah 2002

	MC Non-Injury Crashes			MC Injury Crashes			MC Fatal Crashes			MC Total Crashes		
County	Number	Rate per 100 MVMT	Rate per 10,000 Population	Number	Rate per 100 MVMT	Rate per 10,000 Population	Number	Rate per 1000 MVMT	Rate per 10,000 Population	Number	Rate per 100 MVMT	Rate per 10,000 Population
Beaver	1	0.4	1.6	7	2.9	11.2	0	0.0	0.0	8	3.3	12.8
Box Elder	0	0.0	0.0	8	0.8	1.8	0	0.0	0.0	8	0.8	1.8
Cache	2	0.2	0.2	26	3.1	2.7	0	0.0	0.0	28	3.4	2.9
Carbon	0	0.0	0.0	10	2.9	5.0	1	2.9	0.5	11	3.2	5.5
Daggett	0	0.0	0.0	2	7.3	21.0	0	0.0	0.0	2	7.3	21.0
Davis	6	0.3	0.2	48	2.1	1.9	1	0.4	0.0	55	2.4	2.2
Duchesne	0	0.0	0.0	3	1.5	2.0	1	4.9	0.7	4	2.0	2.7
Emery	0	0.0	0.0	2	0.5	1.9	0	0.0	0.0	2	0.5	1.9
Garfield	1	0.7	2.1	7	5.1	15.0	1	7.3	2.1	9	6.5	19.3
Grand	0	0.0	0.0	8	2.7	9.4	0	0.0	0.0	8	2.7	9.4
Iron	0	0.0	0.0	12	1.9	3.5	0	0.0	0.0	12	1.9	3.5
Juab	0	0.0	0.0	7	1.8	7.9	0	0.0	0.0	7	1.8	7.9
Kane	0	0.0	0.0	13	9.9	20.9	0	0.0	0.0	13	9.9	20.9
Millard	0	0.0	0.0	8	1.8	6.3	1	2.3	0.8	9	2.0	7.1
Morgan	1	0.8	1.4	13	10.2	18.0	0	0.0	0.0	14	11.0	19.4
Piute	0	0.0	0.0	2	6.1	14.2	0	0.0	0.0	2	6.1	14.2
Rich	1	2.3	5.1	4	9.2	20.2	1	23.0	5.1	6	13.8	30.3
Salt Lake	38	0.5	0.4	257	3.2	2.8	4	0.5	0.0	299	3.7	3.2
San Juan	0	0.0	0.0	5	1.9	3.5	0	0.0	0.0	5	1.9	3.5
Sanpete	2	0.9	0.8	0	0.0	0.0	1	4.4	0.4	3	1.3	1.3
Sevier	0	0.0	0.0	7	1.7	3.7	0	0.0	0.0	7	1.7	3.7
Summit	1	0.1	0.3	18	2.6	5.6	0	0.0	0.0	19	2.8	5.9
Tooele	3	0.4	0.7	8	1.0	1.8	2	2.5	0.4	13	1.6	2.8
Uintah	1	0.3	0.4	8	2.7	3.0	0	0.0	0.0	9	3.1	3.4
Utah	6	0.2	0.2	111	3.3	2.8	3	0.9	0.1	120	3.6	3.1
Wasatch	3	1.1	1.8	9	3.4	5.4	1	3.8	0.6	13	4.9	7.8
Washington	4	0.4	0.4	27	2.8	2.7	0	0.0	0.0	31	3.2	3.1
Wayne	0	0.0	0.0	2	4.7	7.7	0	0.0	0.0	2	4.7	7.7
Weber	11	0.7	0.6	56	3.5	2.8	2	1.3	0.1	69	4.3	3.5
Statewide	81	0.4	0.3	688	3.0	3.0	19	0.8	0.1	788	3.5	3.4

Motorcyclist Characteristics

The largest number of total motorcyclists and injured motorcyclists were aged 20 to 24 years show the age of both the driver and the passenger of a motorcycle involved in a crash Figure 5.07 and Table 5.14. Motorcycle crash fatalities occurred most often in the 40 to 49 year age groups.

Figure 5.07 Age of Motorcyclists, Utah 2002



Note: The above graph is based on percentages for the different injury categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. injured motorcyclist) from age group to age group. Do not compare the heights of the different injury categories for a specific age group.

Table 5.14 Age of Motorcyclists, Utah 2002

Age	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
00-04	4	3.1%	1	0.1%	0	0.0%	5	0.6%
05-09	1	0.8%	4	0.5%	1	5.3%	6	0.7%
10-14	1	0.8%	12	1.6%	0	0.0%	13	1.4%
15-19	10	7.7%	95	12.6%	1	5.3%	106	11.7%
20-24	26	20.0%	157	20.8%	3	15.8%	186	20.6%
25-29	15	11.5%	103	13.6%	2	10.5%	120	13.3%
30-34	13	10.0%	61	8.1%	1	5.3%	75	8.3%
35-39	10	7.7%	47	6.2%	0	0.0%	57	6.3%
40-44	10	7.7%	66	8.7%	3	15.8%	79	8.7%
45-49	7	5.4%	70	9.3%	3	15.8%	80	8.8%
50-54	7	5.4%	64	8.5%	2	10.5%	73	8.1%
55-59	8	6.2%	30	4.0%	1	5.3%	39	4.3%
60-64	3	2.3%	17	2.3%	2	10.5%	22	2.4%
65-69	4	3.1%	9	1.2%	0	0.0%	13	1.4%
70-74	1	0.8%	1	0.1%	0	0.0%	2	0.2%
75-79	5	3.8%	1	0.1%	0	0.0%	6	0.7%
80-84	0	0.0%	1	0.1%	0	0.0%	1	0.1%
85+	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Unknown	5	3.8%	15	2.0%	0	0.0%	18	2.0%
Total	130	100.0%	755	100.0%	19	100.0%	904	100.0%

Table 5.15 shows that the majority of motorcycle crash participants (81.4%), injured motorcyclists (82.4%) and motorcycle fatalities (89.5%) were male.

Table 5.15 Gender of Motorcyclists, Utah 2002

Gender	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Female	30	23.1%	129	17.1%	2	10.5%	161	17.8%
Male	97	74.6%	622	82.4%	17	89.5%	736	81.4%
Unknown	3	2.3%	4	0.5%	0	0.0%	7	0.8%
Total	130	100.0%	755	100.0%	19	100.0%	904	100.0%

Examination of the crash placement (driver vs passenger) shows that drivers accounted for the majority (87.4%) of injured motorcyclists and 94.7% of the motorcyclist fatalities (Table 5.16). In addition, there were 1 pedestrian and 2 bicyclists involved in motorcycle crashes who sustained non-fatal injuries.

Table 5.16 Crash Placement of Motorcyclists, Utah 2002

Crash Placement	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Driver	108	83.1%	664	87.9%	18	94.7%	790	87.4%
Passenger	22	16.9%	91	12.1%	1	5.3%	114	12.6%
Total	130	100.0%	755	100.0%	19	100.0%	904	100.0%

Only 37.4% of motorcycle drivers and passengers involved in crashes wore a helmet (Table 5.17). The percentage of helmet use was slightly higher for those who were injured (38.8%), but lower among the fatalities (26.3%). Utah law states that anyone under the age of 18 years riding a motorcycle either as the driver or as a passenger must wear a helmet approved by the Department of Public Safety.

Table 5.17 Helmet Use by Motorcyclists Involved in Crashes, Utah 2002

Helmet	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities		Total Motorcyclists	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Used	40	30.8%	293	38.8%	5	26.3%	338	37.4%
Not Used/ Unknown	90	69.2%	462	61.2%	14	73.7%	566	62.6%
Total	130	100.0%	755	100.0%	19	100.0%	904	100.0%

Alcohol and Other Drugs:

Of the 19 fatal motorcycle crashes, none involved alcohol and other drug use by the motorcycle driver.